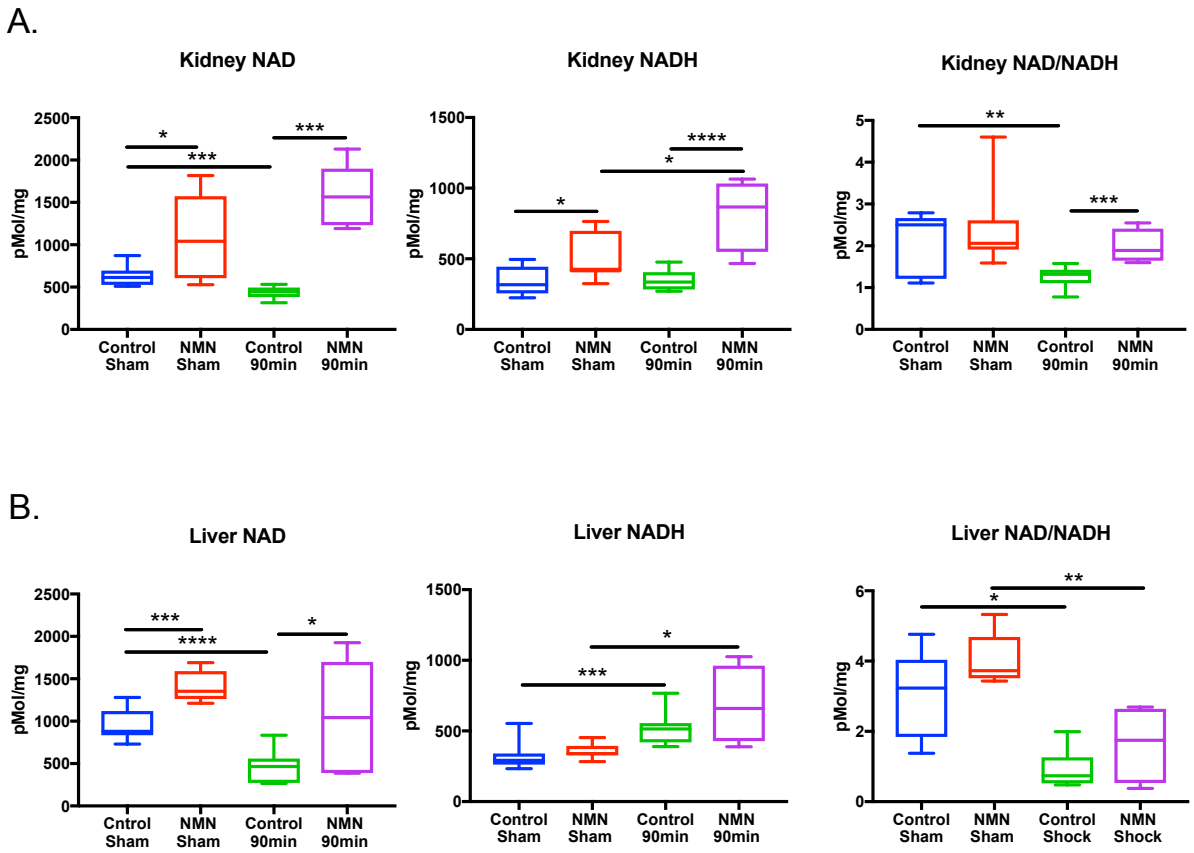
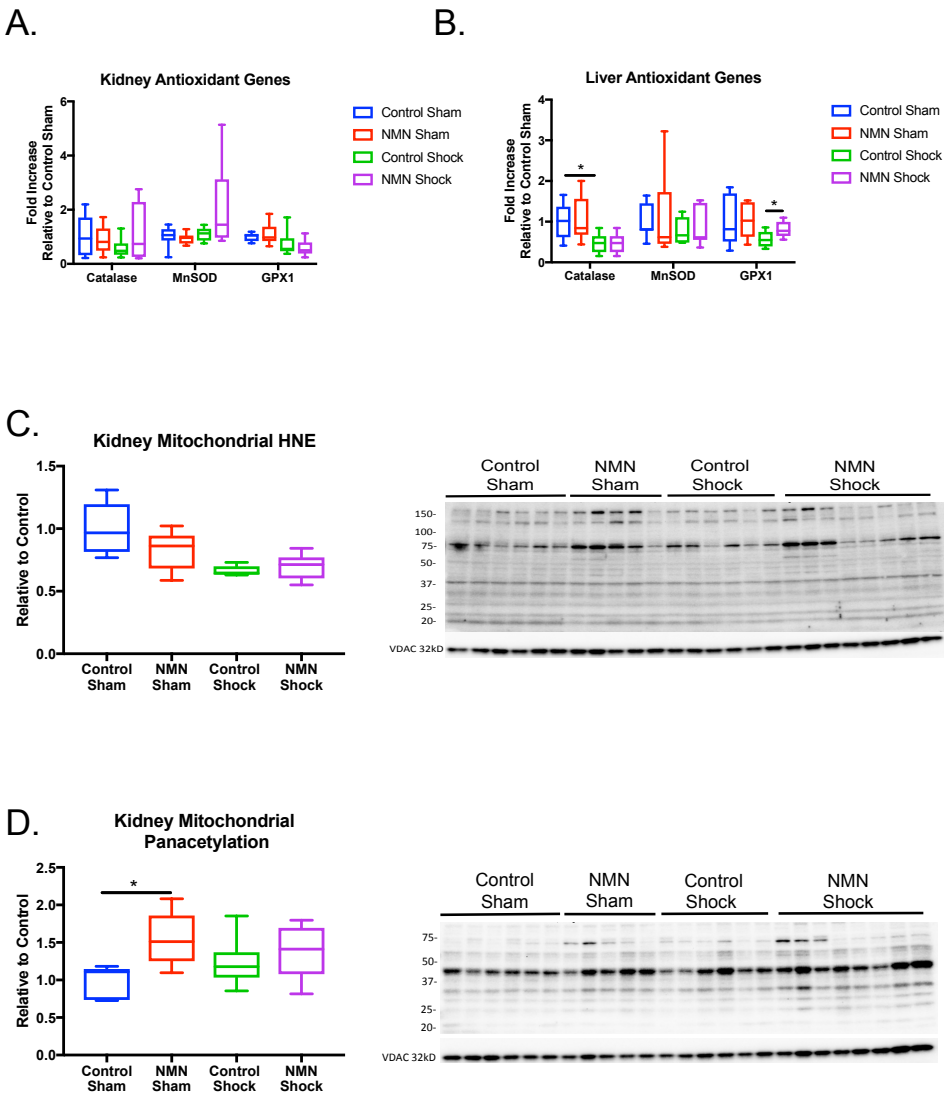


Supplemental Figure 1. The Impact of Hemorrhagic Shock on Tissue NAD(H) Levels
After randomization to water ± NMN (400 mg/kg/day) for 5 days, animals (n=6/treatment) were bled to a mean arterial blood pressure (MAP) of 40mmHg for 90 minutes. Animals were not resuscitated. Tissues were immediately harvested and snap frozen for NAD(H) measurements. Following hemorrhagic shock, NAD levels decreased sharply as did the NAD/NADH ratio. Pretreatment with NMN completely mitigated this decline (**A**). Similarly, NAD levels in the liver decreased following hemorrhagic shock. Although NMN preserved NAD levels, it did not significantly improve the NAD/NADH ratio following shock (**B**). Data are represented using box (median, IQR) and whiskers representing minimum and maximum values.*p<0.05, **p<0.01, ***p<0.001, ****p<0.0001.



Supplemental Figure 2. The Influence of NMN on Kidney Mitochondrial Oxidative Damage and Acetylation Following Hemorrhagic Shock and Resuscitation

After randomization to water ± NMN (400 mg/kg/day) for 5 days, animals (n=6-9/treatment) were hemorrhaged for 90 minutes and resuscitated with 4X the shed volume in LR. Kidney and liver tissues were harvested 1 hour post resuscitation and the expression of catalase, manganese superoxide disumutase (MnSOD) and glutathione peroxidase mRNA were measured using qPCR. Although NMN significantly increased the expression of GPX1 in the liver, its effects on catalase and MnSOD were small and inconsistent across tissues (**A,B**). Kidney mitochondria were immediately harvested, snap frozen and later assessed by immunoblots. NMN treatment did not alter overall oxidative damage as measured by staining for 4-hydoxynonenal (HNE) (**C**). Although NMN increased mitochondrial acetylation in sham animals, it did not alter the total mitochondrial acetylation profile following hemorrhagic shock and resuscitation (**B**). Data are represented using box (median, IQR) and whiskers representing minimum and maximum values. One-way analysis of variance was used to compare groups with a post hoc 2-tailed Students *t* or Mann Whitney test if statistically significant.*p<0.05.

Table 1: Clinical Variables.

Organ Function Assay	Control Sham	NMN Sham	Control Shock	NMN Shock
Aspartate Aminotransferase (IU/L)	34.6 ± 6.2	34.4 ± 4.2	66.9 ± 4.9*	57.9 ± 4.8§
Alanine Aminotransferase (IU/L)	14.1 ± 1.7	11.6 ± 2.2	34.8 ± 5.9*	26.6 ± 4.8§
Creatinine (IU/L)	19.2 ± 1.3	22.9 ± 0.9	37.3 ± 4.8*	33.6 ± 4.8§
Blood Urea Nitrogen (mg/dL)	22.6 ± 2.0	18.2 ± 2.3	26 ±1.2	27.4 ± 0.6§
Creatine Kinase (U/L)	197 ± 53	220 ± 36	613 ± 81*	351 ± 42§♯

Results analyzed by one-way ANOVA followed by 2-tailed Student's t test
*p<0.05 Control Sham vs. Control Shock
§p<0.05 NMN Sham vs. NMN Shock
♯p<0.05 Control Shock vs. NMN Shock